DOCUMENT RESUME

ED 246 256 CE 039 298

AUTHOR	Moore, Lawrence H.; Fox, Brian E.
TITLE	The Kentucky Continuing Education Energy Conservation Consortium, 1983-84. An Evaluation Report.
INSTITUTION	Murray State Univ., KY. Office of Extended Education.
SPONS AGENCY	Kentucky State Dept. of Energy, Frankfort.
PUB DATE	Jun 84
NOTE	88p.
PUB TYPE	Reports - Evaluative/Feasibility (142)
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	*Adult Education; Adult Programs; *Conservation Education; Consumer Education; Economically Disadvantaged; Educational Needs; *Energy Conservation; Instructional Materials; *Outcomes of Education; Postsecondary Education; *Program Effectiveness; *Seminars; State Programs; Statewide Planning
IDENTIFIERS	Calendars; *Kentucky

ABSTRACT

The 1983 Kentucky Energy Conservation Consortium conducted three seminars on home energy conservation at each of 14 postsecondary campuses throughout the state, attracting a total of 3,598 homeowners. The Consortium also distributed 6,000 calendars with energy-saving tips. Although on-site evaluation showed an overwhelmingly positive response to the seminars, a direct mail survey was made later to evaluate the effort of the Consortium more accurately. A survey audience of 1,000 people was chosen randomly from the list of 2,718 persons who completed registration cards at the seminars. Of those persons who received surveys, 370 (37 percent) returned the questionnaires. Thirty-two percent of these respondents said that they had a better understanding of home energy conservation measures, 26 percent said that they had improved their home's energy conservation in some manner, and 21 percent stated that they had educated their family on energy-saving methods. The calendar was rated as a useful educational tool by 28 percent of the participants, although more than half said they did not receive it. Recommendations stemming from the study included presenting energy information for structures other than homes, providing information on natural gas conservation, and directing the programs toward those who are receiving public assistance for energy costs. Survey instruments and the "Calendar to Improve Daily Energy Habits" are appended. (KC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED246256

THE KENTUCKY CONTINUING EDUCATION ENERGY CONSERVATION CONSORTIUM

1983-84

A Consortium of Community Colleges and Universities

Funded through the Kentucky Energy Conservation Plan, with the Kentucky Energy Cabinet

AN EVALUATION REPORT

Moore, Lawrence H., and Fox, Brian E. Kentucky Energy Conservation Program Evaluation. Murray, Kentucky: Murray State University, Office fo Extended Education, June 1984.

CE039298

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.
Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

L Moore

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

TABLE OF CONTENTS

	PAGE
I. STATEMENT OF THE PROBLEM	1
II. SOLUTION	2
III. PROGRAM ELEMENT GOALS	2
IV. PRINCIPAL FEATURES	3
V. EVALUATION ACTIVITIES	3,4
VI. CALENDAR EVALUATION RESPONSES	5
VII. FOLLOW-UP SURVEY	5
VIII. SURVEY PROCEDURE	6,7
IX. FINDINGS	7,8,9
X. SUGGESTIONS FOR FUTURE PROGRAMS	9

	APPENDICIES
Energy Calendar Evaluation	A
Direct Mail Survey Form	B
Initial letter-First Mailing	C
Cover Letter-Second Mailing	D
Copy of 1984 Energy Calendar	E

KENTUCKY CONTINUING EDUCATION

ENERGY CONSERVATION SEMINARS

STATEMENT OF THE PROBLEM

Energy conservation information remains readily available to the general public in the form of various brochures, booklets, films, checklists, and newspaper articles. However, the habit of referring to these various collections of material is quite often after the fact; when the energy bill comes in. Human behavior has a tendency to develop habits through repetition by visual or sensory stimuli. Booklets reflecting the energy appetite of household appliances, for instance, may be taken by the consumer, and stored in a convenient drawer-- seldom to be seen again.

Since the passage of the National Energy Act of 1978, a plethora of information on energy conservation has been developed, disseminated, and distributed to the general public. The problem is not a lack of information, but a lack of logical organization and ready reference for the well-intended collector. Information concerning energy conservation practices should exist as a single, collective, and visible tool which intrudes into the consciousness of an individual; thereby generating increased awareness and the greater opportunity for developing a habit in the use of information.

SOLUTION

The 1983 Kentucky Energy Conservation Consortium, funded by the Kentucky Energy Cabinet through the Kentucky Energy Conservation (KECP), conducted three (3) seminars on home energy conservation at each of fourteen (14) post-secondary campuses throughout the state. The seminars, a part of the Kentucky Energy Conservation Plan, attracted a total of 3,598 homeowners. A second phase of this project included the development, printing, and distribution of 6,000 energy calendars titled "A Calender to Improve Daily Energy Habits." Three thousand (3,000) of the calendars were distributed to seminar participants and the remaining three thousand (3,000) were disseminated to adults enrolled in other continuing education classes with the participating institutions of higher education.

PROGRAM ELEMENT GOALS

* To generate increased awareness and greater opportunity for energy conservation among residential users.
* To foster a strong energy conservation ethic among all energy users.
* To provide knowledge of proven energy techniques.
* To demonstrate "hands-on" application of low cost energy measures in the home.

PRINCIPAL FEATURES

* Design, print, and disseminate and energy conservation calendar.
* Development of seminar topics and schedules.
* Distribution of seminar curriculum to consortium presenters.
* Promotion of seminars.
* Conducting public seminars.
* Evaluating the impact of the seminars.

EVALUATION ACTIVITIES

Results of an on-site site survey of participants during the 1983 seminars indicated an acceptance rate of 94% and an increase of understanding energy conservation materials and methods at 75%. A reduction of household energy consumption, estimated at 20%, is assumed for each participant who responded in a favorable manner. Since the average house unit in Kentucky used 116 million BTU's per year, the 20% reduction estimation would yield a savings of 23.2 million BTU's per household.

The energy savings attributed to this program are calculated as follows:

Total attendance in 1983	3598
Acceptance Rate	.94 x762
Households Affected	716
BTU's per Household	x 116 x 10^6BTU
BTU's Affected	830.5 x 10^9BTU
Reduction to Program	x 20%
Direct Energy Savings	.166 x 10^{12}BTU

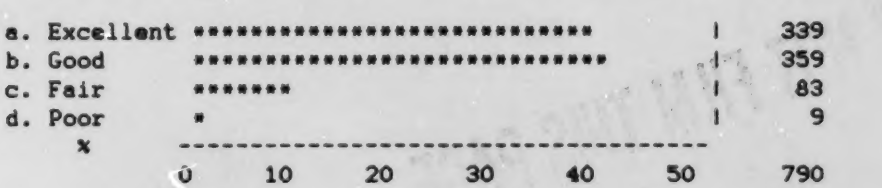
Total Energy Savings for 1983 Report -- .166 Trillion BTU's

Fourteen institutions of higher education participated in 1983, and collectively reached 3,598 persons with energy conservation information.

We obtained completed registration cards for the majority of those who attended the seminars, and received nine-hundred and sixty-one (961) completed evaluation forms. The evaluation forms were pre-printed on the back of the registration cards. A frequency of responses follows:

The evaluation responses were:

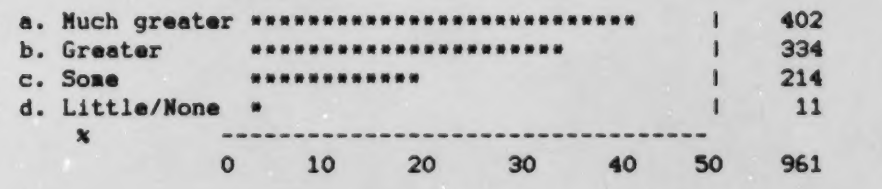
1. Please give your overall rating of the seminar.



2. Did the seminar meet your expectations?

Response	Frequency	Percentage
a. Yes	708	94
b. No	48	6

3. Do you have a better understanding of the subject matter after participating in this seminar?



4. Would you attend another seminar in 1984 if offered?

Response	Frequency	Percentage
a. Yes	702	92%
b. No	60	8%

CALENDAR EVALUATION RESPONSES

Energy calendar recipients returned 85 completed calendar evaluations (Appendix A). Respondents to the calendar evaluation were more likely to be married, and a homeowner with children. Section III of the evaluation instrument indicated that 44% of the respondents reduced water usage, 64% reduced electricity usage, 9% had a home energy audit completed, 51% involved families in energy conservation, 78% improved knowledge about energy conservation in the home, and 57% reduced energy usage overall.

Section IV of the instrument reflected that 92% improved energy conservation behaviors, and that 95% would use a future calendar if available. The energy calendar received the highest rating as a source which recipients found most helpful in learning about energy conservation (75%). Overall, the sources of information concerning energy conservation appear effective if continued in a variety of delivery methods; seminars, newspapers, TV, utility companies, and state and federal government agencies.

FOLLOW-UP SURVEY

In an effort to more accurately evaluate the Kentucky Continuing Education Energy Conservation Consortium, Murray State University's Office of Extended Education conducted a direct mail survey. The effectiveness of a home energy calendar and the usefulness of energy conservation seminars were measured by collecting survey responses. A sample of this survey instrument developed and mailed out as a follow-up to the seminars, is enclosed (Appendix B).

SURVEY PROCEDURE

A survey audience of 1000 people was chosen to participate in the survey. The 1000 names were randomly selected from the list of 2718 people who completed the registration cards at the Kentucky Energy Conservation Plan's home energy conservation seminars and fairs held in September and October of 1983.

First, the survey instrument was developed and printed. Next, a cover letter (Appendix C) was written to explain the purpose of the survey and to solicit participation. On April 2, 1984, the 1000 randomly selected participants were mailed a copy of the survey, its cover letter, and a self addressed, prepaid envelope for ease of return. The cover letter asked that the survey be returned no later than April 30, 1984.

As of April 30, 1984, one hundred and eighty-four (184) surveys were completed and returned. The surveys were previously coded with consecutive numbers (1-1000) and each recipient was assigned a number. This control technique avoided duplication on the second mailing.

The second mailing was immediately sent out on May 2, 1984 to all of the 1000 originally mailed participants who failed to return their completed survey by the April 30, 1984 deadline. Again, a cover letter (Appendix D) explaining the survey, another copy of the survey, and a self addressed, prepaid envelope was mailed with the letter asking to return the completed survey form by May 31, 1984.

As of May 28, 1984, both mailings yielded three-hundred and seventy (370) completed responses equalling thirty-seven percent (37%) of the random sample.

Murray State University's Computing and Information Center printed the survey's results through frequency distribution charts and cross tabulation tables.

FINDINGS

Of the three hundred and seventy people surveyed, 84.9% live in a house: 8.9% live in mobile homes; 4.6% reside in an apartment building, and the rest live in either a duplex or some other living structure. These figures show that it may be helpful to focus energy conservation programs toward mobile homes and structures other than houses.

The question concerning owners and renters found that 85.9% of the participants owned their living structure while the other 13.5% were renters or had some other tenant agreement. Ownership is a very big incentive for energy conservation. It should be known that energy adjustments can raise the value and marketability of the home and also provide tax credits for some of your energy adjustment expenses.

The survey found that the majority (45.1%) of people used natural gas as their primary source of heat. 27.6% of the remaining used electricity and 18.9% are using wood. This finding suggests that more current information on the conservation of natural gas could be helpful.

When asked if they had ever received any public assistance for energy costs, we found that only a small number of the participants had received some kind of aid. 94.6% said that they

had not received any and 4.3% said that they had received some form of assistance. Perhaps publicity efforts for future energy education programs should be directed more toward those who are receiving or have received some type of energy supplement.

After attending the seminars sponsored by the Kentucky Energy Conservation Plan, 32.2% of those people asked said that they had a better understanding of home energy conservation measures. 26.5% said that they had improved their home's envelope in some manner and 21.4% stated that they had educated their family on energy saving methods. These findings suggest that an energy education program may be effective, since two of the three above responses incorporate increased understanding through education processes.

The calendar received an acceptable rating with 28.1% of the participants rating the calendar as either a good or an excellent educational tool. However, some concern is expressed for the 55.6% of the survey participants who claim they did not receive the "Calendar to Improve Daily Energy Habits." The concern arises from the fact that the calendars were distributed at the KECP seminars and the survey audience was taken from the seminar registration cards. Perhaps those who attended and received the calendar simply forgot or put aside the tool, or even more, over one thousand people who attended the seminars and fairs were not registered. Since only three thousand calendars were availble for distribution at the seminars, this may explain the reason why some who attended actually did not receive a calendar. Overlooking the 55.6% that did not receive the the calendar, the most important reflection is that those who did receive the "Calendar to Improve Daily Energy Habits" rated it as a useful tool for energy education.

Thirty-eight and one tenth percent (38.1%) of those people surveyed claimed that this year's energy usage had increased over last year's usage. 29.7% said that their usage had remained the same. Most important though, 20.3% stated that their energy usage this year compared to last year's had actually decreased overall. Many of the people said that they had reduced the total amount of energy (kilowatts) they used this year, but the cost of energy had increased their bills.

SUGGESTIONS FOR FUTURE PROGRAMS

Survey results, project experience, and consortium members comments generated suggestions for future program endeavors including:

1) Current energy conservation information for living structures other than homes. (i.e. Mobile homes, Apartments)
2) Current energy conservation information for users of natural gas. (Primary source of heat for those surveyed.)
3) Make aware the incentives for energy saving efforts.
4) Direct the programs more toward those who are most in need of energy conservation information---those who are receiving or have received energy assistance in the past.
5) Develop an energy conservation curriculum for college credit.
6) Develop tools, teaching kits, and other resources for energy education programs.

A survey of past KECP consortium presenters reflects that the focus of future programs should be directed at private and public groups and associations (i.e. Rotary, Kiwanis, Lions, Homemaker Extension Groups, Local Women's Clubs); organizations that the key presenters can visit, by request, to present energy information and distribute pertinent materials. Groups of more like-minded individuals will more readily interact and share information than groups of individual learners responding to public seminars.

APPENDIX A

SURVEY SURVEY SURVEY SURVEY SURVEY SURVEY SURVEY SURVEY SURVEY SURVEY SURVEY

Please complete this evaluation form and mail it before January 15, 1984. The results will assist the Kentucky Department of Energy in the Kentucky Energy Conservation Plan efforts. Include your name, address, and phone number if you wish to be eligible for an Energy Conservation Prize drawing. Drawing will be held on January 20, 1984. Winners will be notified before 1 February, 1984.

1983 ENERGY CALENDAR EVALUATION

Name _____

Street _____

City _____ State _____ Zip _____

Phone number _____

I. 1 Age _____ 2 Years of school completed _____

II. Check any of the below items which describe you:

___1 Homeowner ___2 Renter ___3 Landlord
___4 Married ___5 Single ___6 Student
___7 Male ___8 Female ___9 Parent

III. Which of the activities listed below apply to you as a result of this calendar?

___1 Reduced water usage.
___2 Reduced electricity usage.
___3 Had a home energy audit completed.
___4 Involved my family in energy conservation.
___5 Recorded electric meter readings.
___6 Weekly ___7 Monthly
___8 Improved my knowledge about energy conservation in the home.
___9 Reduced energy usage overall.

IV. Value of calendar

1 Has this calendar improved your energy conservation behavior? Yes___ No___
2 Would you recommend this calendar to others? Yes___ No___
3 Was the calendar posted on a wall? Yes___ No___
4 Would you use another energy calendar in the future? Yes___ No___
5 Does your family use this calendar? Yes___ No___

V. Suggestions for Calendar Improvement

___1 Needs larger pages.
___2 Needs more energy tips.
___3 Need more information on pages.
___4 Need better illustrations.
___5 No changes needed.

VI. Which sources have you found most helpful in learning about energy conservation?

___1 Energy seminars
___2 Energy calendar
___3 Newspapers and TV
___4 Utility companies
___5 Energy equipment dealers
___6 Friends and relatives
___7 Other sources
___8 State Government Energy Department
___9 United States Department of Energy

MAILING INSTRUCTIONS: *fold bottom third of form up, then fold top third down. Seal with tape. No postage is needed. Please mail by January 15, 1984. Thank you.*

fold here

fold here

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST CLASS PERMIT NO. 1 FRANKFORT, KY.

POSTAGE WILL BE PAID BY ADDRESSEE

Kentucky Energy Project
Office of Extended Education
Murray State University
Murray, Ky. 42071

14

tape here

APPENDIX B

ENERGY SURVEY

I. Which of the following describe where you live:

1)____ House
2)____ Apartment
3)____ Duplex
4)____ Mobile Home
5)____ Other (Explain)_____

II. Are you an owner or a renter?

1)____ Owner
2)____ Renter

III. What is your primary source of heat?

1)____ Electric
2)____ Gas
3)____ Oil
4)____ Wood
5)____ Coal
6)____ Solar
7)____ Other (Explain)_____

IV. During the past two years, have you received any public energy assistance money to help pay your utility costs?

1)____ Yes
2)____ No

V. After attending the energy conservation seminar or energy fair, which of the following conservation measures have you taken? I have:

1)____ Increased understanding of general home energy conservation methods
2)____ Directly reduced primary heating/cooling source usage
3)____ Directly reduced water usage and expenses
4)____ Conducted a home energy audit
5)____ Improved home's envelope (window, doors, etc.)
6)____ Educated family on home energy conservation methods
7)____ Started monitoring home's actual energy usage and expense
8)____ Directly reduced home's overall energy usage and expense
9)____ Other (Explain)_____

VI. If you received the "Calendar to Improve Daily Energy Habits," how would you rate the calendar as an educational tool?

1)_____Excellent 2)_____Good 3)_____Fair 4)_____Poor 5)_____Did Not Receive

VII. Compared to previous winters, how would you describe this winter's energy usage in your home or apartment?

1)_____Remain Same 2)_____Increase 3)_____Decrease 4)_____Do Not Know

*** PLEASE ADD ANY COMMENTS OR SUGGESTIONS ON THE BACK ***

APPENDIX C

Murray State University

Office of Extended Education
Kentucky Energy Programs
Murray, Ky. 42071 (502) 762-2190

April 2, 1984

Dear Friend:

We have enclosed an Energy Survey with this letter and ask that you take the time to complete and return the short form before April 30, 1984. Please mail the survey back to us in the enclosed prepaid envelope.

Early last winter, the Kentucky Energy Cabinet promoted energy conservation seminars and energy fairs through the Kentucky Energy Conservation Plan. At many of the activities, a 1984 calendar titled "A Calendar to Improve Your Daily Energy Habits" was given to participants. Your attendance to one of these activities indicates your interest in conserving energy and makes you a valuable survey member.

The survey asks for anonymous information about where you live, and what you have been able to do to conserve energy. When the results of the survey are completed, we will have gained information for developing programs to assist Kentuckians in improving energy habits. The survey will also show us the value of the energy seminars and fairs that you attended.

We appreciate your attention to this letter and hope to receive your completed survey soon.

Thank you very much for your time and effort.

Sincerely,

Lawrence Moore

Lawrence Moore
Project Director

Enclosures

Murray State University Murray, Ky. 42071

May 1, 1984

Dear Survey Participant:

We recently mailed you a survey like the one enclosed concerning your participation in the energy conservation fairs and seminars sponsored by the Kentucky Energy Conservation Plan. The number of surveys returned so far will be very helpful, but more returns are needed to validate the survey.

If you have not yet completed the survey, we encourage you to do so now and return it in the enclosed self-addressed, pre-paid envelope by May 25th. The survey will only take a few minutes to complete and the information given will be used to help plan improved home energy conservation programs for the public. It is very important to know what areas of conservation you have taken so we can develop appropriate programs. Please take the time to complete and return the survey as soon as possible. We appreciate your cooperation and participation.

Sincerely,

Lawrence Moore

Lawrence Moore
Project Director

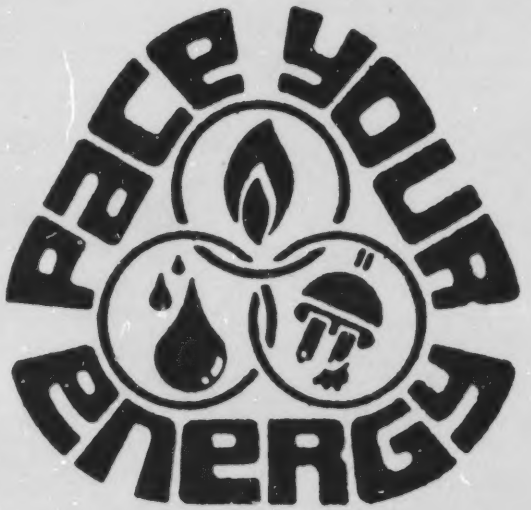
Enclosures: (2)

A Calendar to

IMPROVE

DAILY ENERGY HABITS

1984



KENTUCKY ENERGY CABINET

A PRODUCT OF

THE KENTUCKY ENERGY CONSERVATION PLAN

JOHN Y. BROWN JR.
GOVERNOR

WILLIAM B. STURGILL
SECRETARY

KENTUCKY ENERGY CABINET

Dear Homeowner:

The Kentucky Energy Cabinet and the Continuing Education Consortium are happy to provide you and your family with the enclosed calendar which has been developed under the Kentucky Energy Conservation Plan as part of its energy education and awareness efforts.

This calendar is unique in that it contains month-to-month energy conservation measures, reminders, and reference sources that will enable you to save energy and money as each season changes.

In a time of rapidly rising energy costs, we hope this calendar will serve as a source of encouragement by illustrating ways to reduce costs in your family budget through cultivating good energy conservation practices in the home.

Sincerely,

Bob Johnston

Bob Johnston, Director
Division of Conservation

BJ/br

Enclosure

KENTUCKY CENTER FOR ENERGY RESEARCH
P.O. BOX 11888
LEXINGTON, KENTUCKY 40578
(606) 252-5535

The Kentucky Continuing Education Energy Conservation Consortium Member Institutions

Ashland Community College
Eastern Kentucky University
Henderson Community College
Hopkinsville Community College
Maysville Community College
Morehead State University
Murray State University
Northern Kentucky University
Paducah Community College
Prestonsburg Community College
Somerset Community College
Union College
University of Louisville
Western Kentucky University

Calendar Development Committee

Dr. Neil Adams	Mr. Robert McAninch
Dr. Richard Brooker	Mr. Larry Moore
Mr. Charles Dibble	Dr. Mike McPherson
Mr. Tim Guthrie	Ms. Ada Salisbury
Ms. Sandy Holland	Dr. Margaret Smith
Ms. Margy Johns	Dr. William Wagner
Mr. John Klee	Dr. Charles Widden

Artist — Rick Mjos

This energy calendar was prepared with the support of the United States Department of Energy (DOE) grant #DE-FG44-77CS 60008. However, any opinions, findings, conclusions, or recommendations expressed herein are those of the author and do not necessarily reflect the view of the Department of Energy.

USING THE ENERGY CONSERVATION CALENDAR

The blocks for many of the days of the month in this calendar contain an energy thought for the day. Some of the thoughts call for immediate action, and some are awareness tips. Not all of the thoughts will fit in your particular home though. For instance, you may not presently have a woodburning stove or electric water heater.

What does apply to every homeowner is the Saturday block for recording energy uses as measured by an electricity meter in your home. Continued use of this block will increase awareness of energy use and should give you a method to monitor your energy consumption.

Some preparations for using the calendar are:

1. COLLECT PAST ENERGY RECORDS
   Contact your local utilities office to see if they can supply you with last year's kilowatt hours used by month. Or if you have been keeping these bills, gather them and refer to them for comparisons of what you used last year with what you are using this year.

2. SET SOME ENERGY GOALS
   All of us need some target by which to measure our achievement. By looking at past records, determine a realistic goal of savings and use this goal to measure your activities.

3. BE PATIENT
   Sometimes it is difficult to continue a practice when the results are not immediate and measurable. Actions such as fixing dripping water faucets take time to measure.

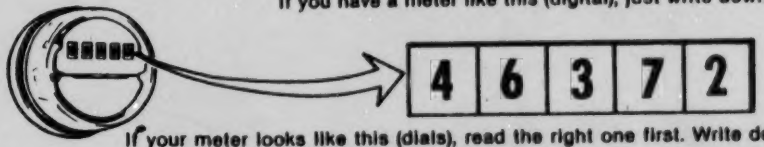
4. RECORD YOUR ACTIVITIES
   A simple check mark in the days that you try one of the practices mentioned will give you some idea of what you are building. When you look at a page and see a lot of checkmarks, you can be more convinced that your involvement with energy conservation is getting good and growing to better. An annual chart for monitoring your energy usage is included at the end of the December, 1984 month. If used, you will be able to compare your improving energy conservation habits.

5. EVALUATION
   A page after the December 1983 month is included to let us know what you think of this concept — an energy calendar. Please take the time to fill it out after December and mail it to us. It will help us in future efforts to educate Kentuckians about the need for energy conservation practices.

SEPTEMBER 1983

The Time to Prepare

If you have a meter like this (digital), just write down the numbers.



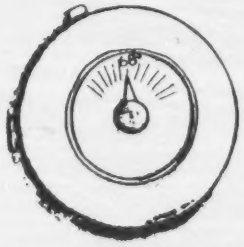
If your meter looks like this (dials), read the right one first. Write down the last number the hand has passed.

READ FROM RIGHT TO LEFT

SEPTEMBER 1983

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Start building energy saving habits — teach your children to read the electric meter.				1 *Clean or replace filters in cooling system.*	2	3 *USE SATURDAY TO RECORD YOUR ELECTRICITY CONSUMPTION*
4 *Change some 100 watt bulbs to 60 or 75 watts.*	Labor Day 5	6 *A 5 minute shower can save you 10,000 gallons a year.*	7	8 *Practice a five minute shower.*	9	10 *Today's Reading ___ - Less Last Week's Reading ___ = Equals Usage for Week ___*
11 *A slow leak in the hot water faucet costs money in your energy bill.*	12	13 *A slow drip of a water faucet can use 350 gallons a month.*	14	15 *Turn out lights not being used.*	16	17 *Today's Reading ___ - Less Last Week's Reading ___ = Equals Usage for Week ___*
18 *An electric water heater costs about 20% of your electric bill.*	19	20 *Lower the thermostat on the hot water heater.*	21	22 *Check caulking around windows.*	23	24 *Today's Reading ___ - Less Last Week's Reading ___ = Equals Usage for Week ___*
25 *Clean your chimney or flue before using. Make sure it is clear.*	26	27 *Insulate hot water pipes.*	28	29 *Use cold water setting for rinse in washing machine.*	30	

OCTOBER 1983



HEATING

Electric heat consumes more kilowatthours** than anything else in your home, averaging about 44 percent of the total electric bill each year. Heating is an area where big savings are possible.

1. Set the heating thermostats no higher than 68 degrees. (You may be asked to lower this temperature in times of energy shortage.)
2. Close doors to unused rooms and use low heat or no heat in them. (Don't close off rooms if you have a central system.)
3. Install storm doors and windows to reduce heat loss, or use plastic storm window kits.
4. Caulk around windows and weatherstrip doors.
5. Keep central system air filters clean.
6. Keep damper closed when not using the fireplace.
7. Keep outside doors closed.
8. When building a new home or replacing your existing heating system, check into the electric heat pump — the most efficient central electric heating you can buy.

***(Gasoline is sold by the gallon and electricity is sold by the kilowatthour. An easy way to "see" the measurement is to think of ten 100-watt light bulbs — when they have been on for one hour, they have used a kilowatthour.)*

INSULATION

The best way to save the most electricity is to insulate your home. Compared to a home with no insulation, one with full insulation can reduce heating costs by half, cooling costs by one-third.

Put at least *R-19 in the attic and R-11 under the floor. If you can only insulate one area, make it the ceiling to cut off heat's main escape route. For new homes, we recommend Super Saver standards — R-30 in the attic and R-19 in the walls and under the floor.

For complete information about insulation and how you can install it yourself, ask your power distributor for a copy of **Installing Home Insulation**.

**("R" refers to the ability of a material to resist the flow of heat. The higher the R-number, the greater the insulating value.)*

OCTOBER 1983

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1 *Today's Reading ___ - Less Last Week's Reading ___ = Equals Usage for Week ___*
2 *Check Filters in Heating System.*	3	4 *Hot water heater Thermostat can be lowered 10-20 Degrees.*	5	6 *Start cutting wood for '84 burning season. Seasoning starts now.*	7	8 *Today's Reading ___ - Less Last Week's Reading ___ = Equals Usage for Week ___*
9 *This evening, ask children to play lights out. Reward them for every light turned out.*	10 Columbus Day (Observed)	11 *A hot water tap leak can cost 50 cents a day.*	12 Columbus Day	13 *Open drapes in daytime to admit sun's light.*	14	15 *Today's Reading ___ - Less Last Week's Reading ___ = Equals Usage for Week ___*
16 *The higher the R-Value of insulation, the better it is.*	17	18 *Water costs 4 cents an inch in the bathtub.*	19	20 *Turn off shower while soaping or shampooing.*	21	22 *Today's Reading ___ - Less Last Week's Reading ___ = Equals Usage for Week ___*
23 *Cover woodpile to keep it dry. Check water taps today. Stop those leaks.* 30	24 31	25 *Check chimney and flues for creosote buildup.*	26	27 *Creosote buildup in chimney & flue causes most woodstove fires.*	28	29 *Today's Reading ___ - Less Last Week's Reading ___ = Equals Usage for Week ___*

NOVEMBER 1983

INSULATION

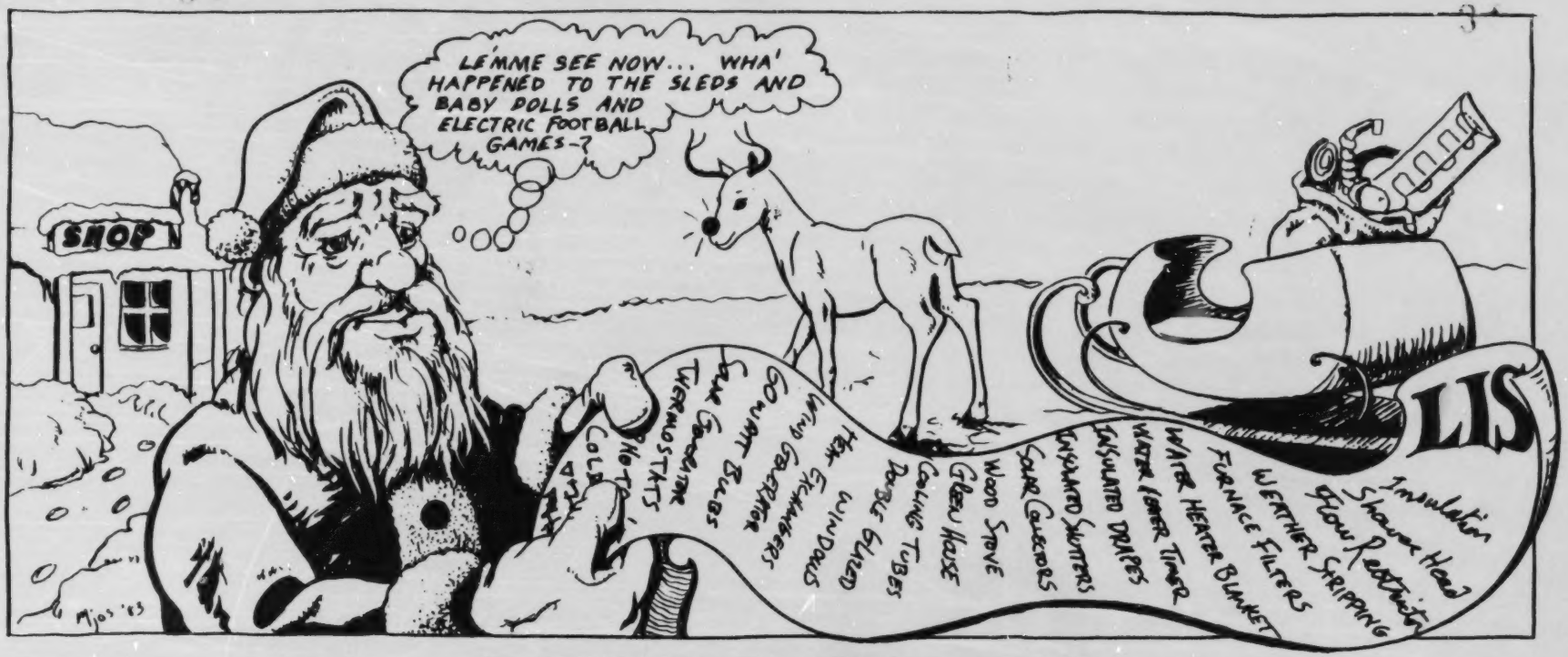
WHAT KIND SHOULD I USE?

The kind of insulation you select will depend on the amount needed, where it is applied, ease of installation, availability and cost. The above chart lists the types of insulation recommended for attics, the methods of installation, advantages and materials.

Form	Method of Installation	Where Applicable	Advantages	Materials
Blankets or batts	Fitted between woodframe studs joists and beams	• All unfinished walls, floors, and ceilings	• Do-it-yourself • Best suited for standard stud and joist spacing, which is relatively free from obstructions. • Blankets; Little waste because it's hand-cut • Batts: More joints, but easier to handle than large rolls	• Rock wool • Glass fiber
Loose fill (poured in)	Poured between attic joists	• Unfinished attic floors and hard-to-reach places • Irregularly shaped areas and around obstructions	• Do-it-yourself • Easy to use for irregularly shaped areas and around obstructions	• Rock wool • Glass fiber • Cellulose fiber • Vermiculite • Perlite
Blown fill	Blown into place by special equipment applied by contractor	• Anywhere that frame is covered on both sides, such as side walls • Unfinished attic floors, obstructions and hard-to-reach places	• The only insulation that can be used in finished areas • Easy to use for irregularly shaped areas and around obstructions	• Rock wool • Glass fiber • Cellulose fiber

NOVEMBER 1983

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1 *Check Filters in Heating System.*	2	3 *Are your hot water pipes insulated?*	4	5 *Today's Reading ___ - Less Last Week's Reading ___ = Equals Usage for Week ___*
6 *Wear heavy long-sleeve sweaters; lower thermostat 2°.*	7	Election Day 8	9	10 *Cotton or wool clothes are best for staying warm.*	Veterans Day 11	12 *Today's Reading ___ - Less Last Week's Reading ___ = Equals Usage for Week ___*
13 *Close drapes at night to keep in heat.*	14	15 *R-Value means resistance to heat flow.*	16	17 *6" of ceiling insulation has R-Value of 17.*	18	19 *Today's Reading ___ - Less Last Week's Reading ___ = Equals Usage for Week ___*
20 *Check for cold air around doors and windows. Add weather-stripping if needed.*	21	22 *Keep thermostat at 68°.*	23	Thanksgiving Day 24 *Give thanks for our resources.*	25	26 *Today's Reading ___ - Less Last Week's Reading ___ = Equals Usage for Week ___*
27 *Close doors quickly to prevent heat loss.*	28	29 *Unless fireplace is being used, keep damper closed.*	30			



DECEMBER 1983

HOW MUCH INSULATION SHOULD I USE?

Your money's worth in insulation is measured in R-value. The R-value measures how much resistance the insulation presents to heat flow. The higher the R-value the better the insulation. Remember, the R-value does not always depend on the thickness of the material. One brand of insulation might be slightly thicker than another, but if both brands are marked with the same R-value, they will resist heat flow equally. You will not save twice as much energy with twice as much insulation. Each additional thickness has a relatively smaller beneficial effect.

Recommended R-values will vary according to the climate zone, the part of the house to be insulated, and the type and quality of materials used in the construction of the house.

R-Values Chart

	Batts or Blankets		Loose Fill (Poured In)		
	glass fiber	rock wool	glass fiber	rock wool	cellulosic fiber
R-11	3½"-4"	3"	5"	4"	3"
R-13	4"	4½"	6"	4½"	3½"
R-19	6"-6½"	5¼"	8"-9"	6"-7"	5"
R-22	6½"	6"	10"	7"-8"	6"
R-26	8"	8½"	12"	9"	7"-7½"
R-30	9½"-10½"	9"	13"-14"	10"-11"	8"
R-33	11"	10"	15"	11"-12"	9"
R-38	12"-13"	10½"	17"-18"	13"-14"	10"-11"

TAX INCENTIVES

A federal tax credit of 15% is allowed for the cost of insulation and other energy-saving devices, such as storm doors and windows, caulking and weatherstripping, automatic energy-saving setback thermostats, and many other items. The maximum credit is $300.

From January 1, 1980, the federal solar tax credit is 40% of the first $10,000 of the cost of active solar systems, as well as wind or geothermal devices. It does not, however, include solar swimming pool heating systems. The maximum credit is $4,000.

DECEMBER 1983

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				1 *Check Filters in Heating System. Replace if necessary.*	2	3 *Today's Reading ___ - Less Last Week's Reading ___ = Equals Usage for Week ___*
4 *Seasoned wood burns hotter than unseasoned.*	5	6 *Turn out all unnecessary lights.*	7	8 *Have you changed any 100 watt bulbs to 60 watt bulbs?*	9	10 *Today's Reading ___ - Less Last Week's Reading ___ = Equals Usage for Week ___*
11 *Have a family meeting to find ways to save energy.*	12	13 *Automatic dishwashers use an average of 14 gallons of hot water per load.*	14	15 *Check your thermostat by placing a thermometer next to it.*	16	17 *Today's Reading ___ - Less Last Week's Reading ___ = Equals Usage for Week ___*
18 *Setting the thermostat back one degree can save 3% of your heating bill.*	19	20 *Consider a heat pump when you improve your home.*	21	22 *When cooking, match element to pan size. Also, don't preheat oven.*	23	24 *Today's Reading ___ - Less Last Week's Reading ___ = Equals Usage for Week ___*
Christmas Day 25 *MERRY CHRISTMAS ENERGY SAVER!*	26	27 *Use cold water in the food disposal.*	28	29 *Do any doors need weather stripping?*	30	31 *Today's Reading ___ - Less Last Week's Reading ___ = Equals Usage for Week ___*

JANUARY 1984

Materials Needed:

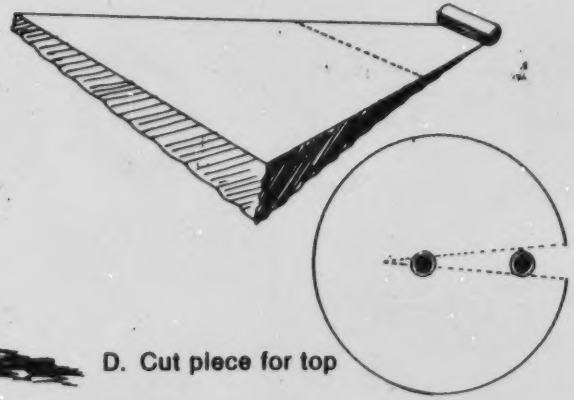
1. 3½" R-11 blanket type with foil backing
2. Duct tape
3. Scissors or knife
4. Tape measure

Safety Precautions:

Don't cover the temperature pressure relief valve with insulation.

A. Measure

B. Cut a sample piece



D. Cut piece for top

C. Place around heater

JANUARY 1984

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
New Year's Day **1**	**2**	**3** *Think ahead before opening refrigerator, close the door as soon as possible.*	**4**	**5** *Check Filters in Heating System.*	**6**	**7** *Today's Reading ____ - Less Last Week's Reading ____ = Equals Usage for Week ____*
8 *Turn out all lights not being used now. Get the habit!*	**9**	**10** *Insulate your hot water tank and pipes.*	**11**	**12** *When cooking, use covers on all pans.*	**13**	**14** *Today's Reading ____ - Less Last Week's Reading ____ = Equals Usage for Week ____*
15 *Have you mailed the Calendar Evaluation form?*	**16**	**17** *How many inches of insulation are in your ceilings?*	**18**	**19** *Add storm windows or cover windows with plastic sheets.*	**20**	**21** *Today's Reading ____ - Less Last Week's Reading ____ = Equals Usage for Week ____*
22 *Close drapes at night.*	**23**	**24** *Hot water heaters use about 20% of your energy.*	**25**	**26** *Have you had an energy audit done on your home?*	**27**	**28** *Today's Reading ____ - Less Last Week's Reading ____ = Equals Usage for Week ____*
29 *Close off unused rooms.*	**30**	**31** *Check heat registers. Keep them clean and uncovered by drapes and furniture.*	*PLEASE RETURN CALENDAR EVALUATION FORM BY JANUARY 15, 1984.*			

FEBRUARY 1984

Insulate Yourself — With Clothes

With energy costs continuing to skyrocket, we are all looking for ways to stay warm in our homes in winter and still save on fuel bills. Obviously the more clothing we wear the warmer we'll be, but the selection of clothing can have a greater impact on keeping you warm than you may realize.

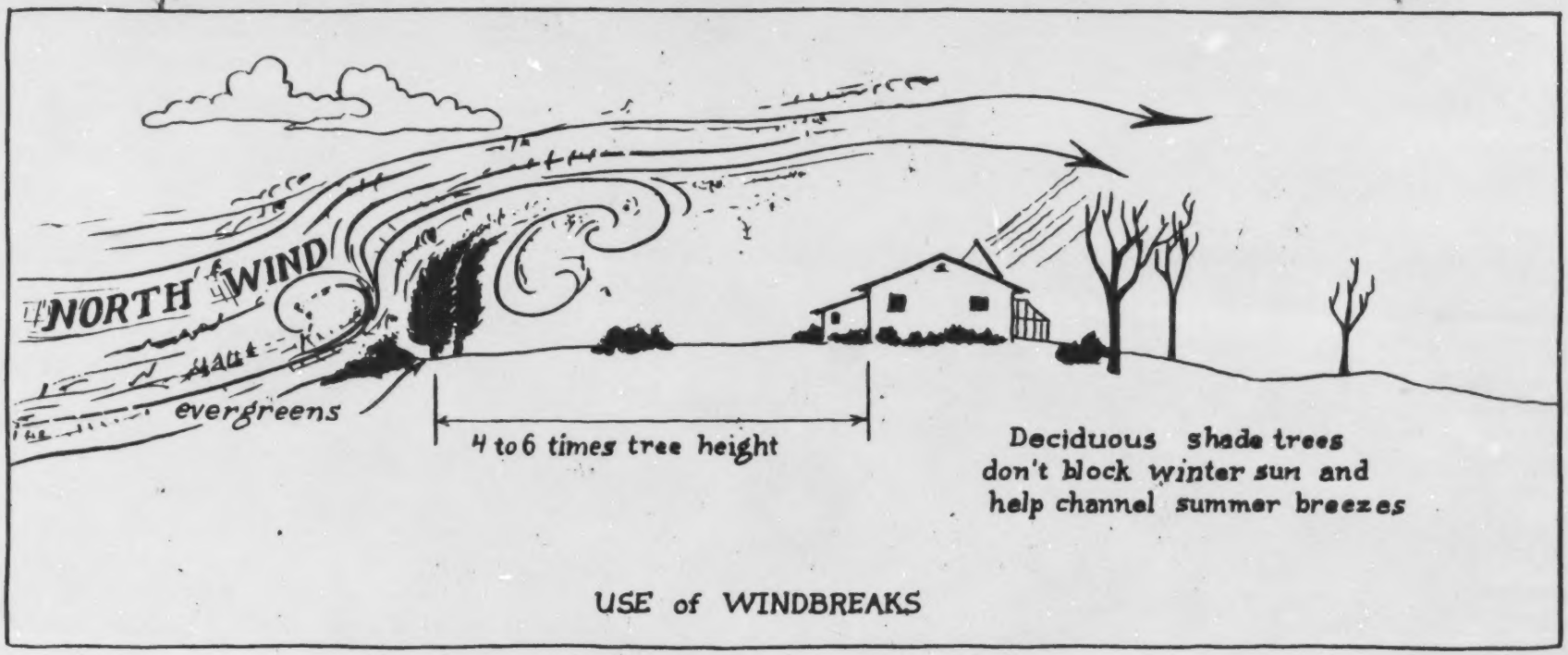
Clothing changes can make significant differences in our comfort, according to the John B. Pierce Foundation of New Haven, Connecticut, and to figures provided by Dr. Ralph Goldman of the U.S. Army Ergonomics Laboratory.

If a man:	He can lower the thermostat setting:
Replaces light pants with heavy pants	.6°F
Replaces a short-sleeved shirt with a long-sleeved shirt	.8°F
Puts on a winter-weight jacket	4.5°F
Puts on an undershirt (T-shirt)	.5°F
Replaces ankle-length socks with knee-length socks	.6°F
Puts on a light, long-sleeved sweater	2.0°F
Puts on a heavy, long-sleeved sweater	3.7°F

If a woman:	She can lower the thermostat setting:
Replaces a skirt with slacks	1.5°F
Replaces a sleeveless dress with a long-sleeved dress	.2°F
Replaces a dress made of an open weave with a tightly woven fabric	.5°F
Wears nylon stockings	.1°F
Wears a full slip	1.0°F
Pulls on a light, long-sleeved sweater	1.7°F
Pulls on a heavy, long-sleeved sweater	3.7°F

FEBRUARY 1984

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1	2 *Check filters in heating system. If they are dirty, replace them.*	3	4 *Today's Reading ____* *- Less Last* *Week's Reading ____* *= Equals* *Usage for Week ____*
5 *If you use space heaters, make sure you have adequate ventilation.*	6	7 *Showers use less water than baths.*	8	9 *Leave oven door open when finished cooking.*	10	11 *Today's Reading ____* *- Less Last* *Week's Reading ____* *= Equals* *Usage for Week ____*
Lincoln's Birthday 12	13	Valentine's Day 14 *Be a sweetheart, eat dinner by candlelight.*	15	16 *Properly planned landscaping can save energy.*	17	18 *Today's Reading ____* *- Less Last* *Week's Reading ____* *= Equals* *Usage for Week ____*
19 *Is your thermostat on 68°?*	Washington's Birthday (Observed) 20	21 *February is a good time to plant trees and shrubs.*	Washington's Birthday 22	23 *Replace incandescent bulbs with fluorescent lamps.*	24	25 *Today's Reading ____* *- Less Last* *Week's Reading ____* *= Equals* *Usage for Week ____*
26 *Involve your family in home energy conservation.*	27	28 *Turn off unused lights.*	29			

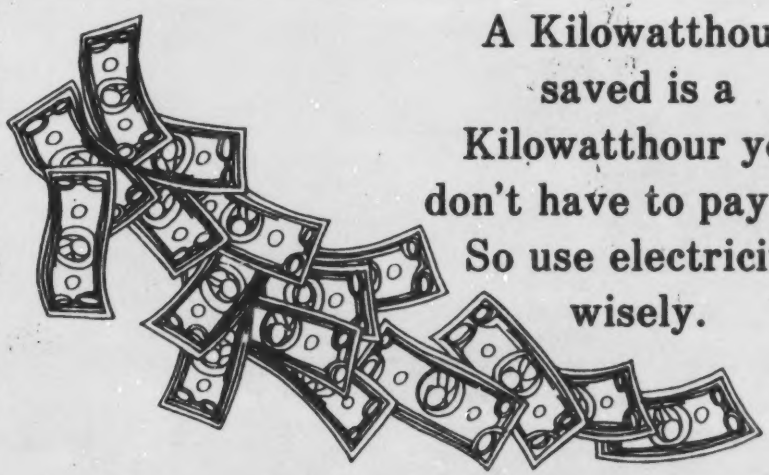


USE of WINDBREAKS

MARCH 1984

Electricity is measured and you are billed by the kilowatthour (kWh). A kWh is equivalent to the electricity used by ten 100-watt light bulbs burning for one hour. To get the approximate operating cost for the appliances listed below, contact your power distributor for your cost per kWh. Then multiply the estimated monthly kWh by the electric rate.

	Estimated Monthly Kilowatthours
Quick-recovery water heater	350
Clothes washer	158
Refrigerator/freezer (14-cu. ft. frostless)	150
Freezer (15-cu. ft. frostless)	150
Dishwasher	130
Freezer (15-cu. ft. manual defrost)	100
Refrigerator/freezer (14-cu. ft. manual defrost)	100
Range	100
Clothes dryer	83
Color television	
Tube type	55
Solid state	37
Dehumidifier	33
Black & white television	
Tube type	29
Solid state	29

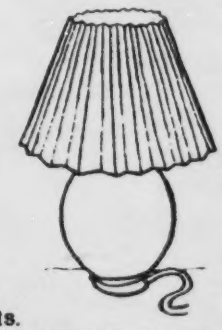


A Kilowatthour saved is a Kilowatthour you don't have to pay for. So use electricity wisely.

MARCH 1984

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				1 *Check furnace filters.*	2	3 *Today's Reading ___* *- Less Last* *Week's Reading ___* *= Equals* *Usage for Week ___*
4 *Begin preparing cooling system for summer.*	5	6 *When drying clothes, separate loads into heavy & light-weight items.*	Ash Wednesday 7	8 *Keep light bulbs and fixtures clean.*	9	10 *Today's Reading ___* *- Less Last* *Week's Reading ___* *= Equals* *Usage for Week ___*
11 *When buying appliances, check energy guides.*	12	13 *Space heaters can be more efficient this month.*	14	15 *Install flow restrictors in your shower & faucets.*	16	St. Patrick's Day 17 *Today's Reading ___* *- Less Last* *Week's Reading ___* *= Equals* *Usage for Week ___*
18 *Recycle cans, glass, and paper when possible.*	19	20 *When possible, use cold water for housecleaning.*	21	22 *Have you had an energy audit performed on your home?*	23	24 *Today's Reading ___* *- Less Last* *Week's Reading ___* *= Equals* *Usage for Week ___*
25 *Turn off T.V.'s, radios, & other small appliances when not in use.*	26	27 *Check seal around refrigerator door. Close door on a dollar bill, if pulls out easily, have door adjusted.*	28	29 *Tax-time is near; do you have any energy tax credits.*	30	31 *Today's Reading ___* *- Less Last* *Week's Reading ___* *= Equals* *Usage for Week ___*

APRIL 1984



LIGHTING

You'll be using lights wisely when you —

1. Use fluorescent lights.
2. Turn off any light not needed in the summer. But since lights produce heat, they will contribute to your heating system in the winter.
3. Use smaller wattage bulbs where lighting is not critical.

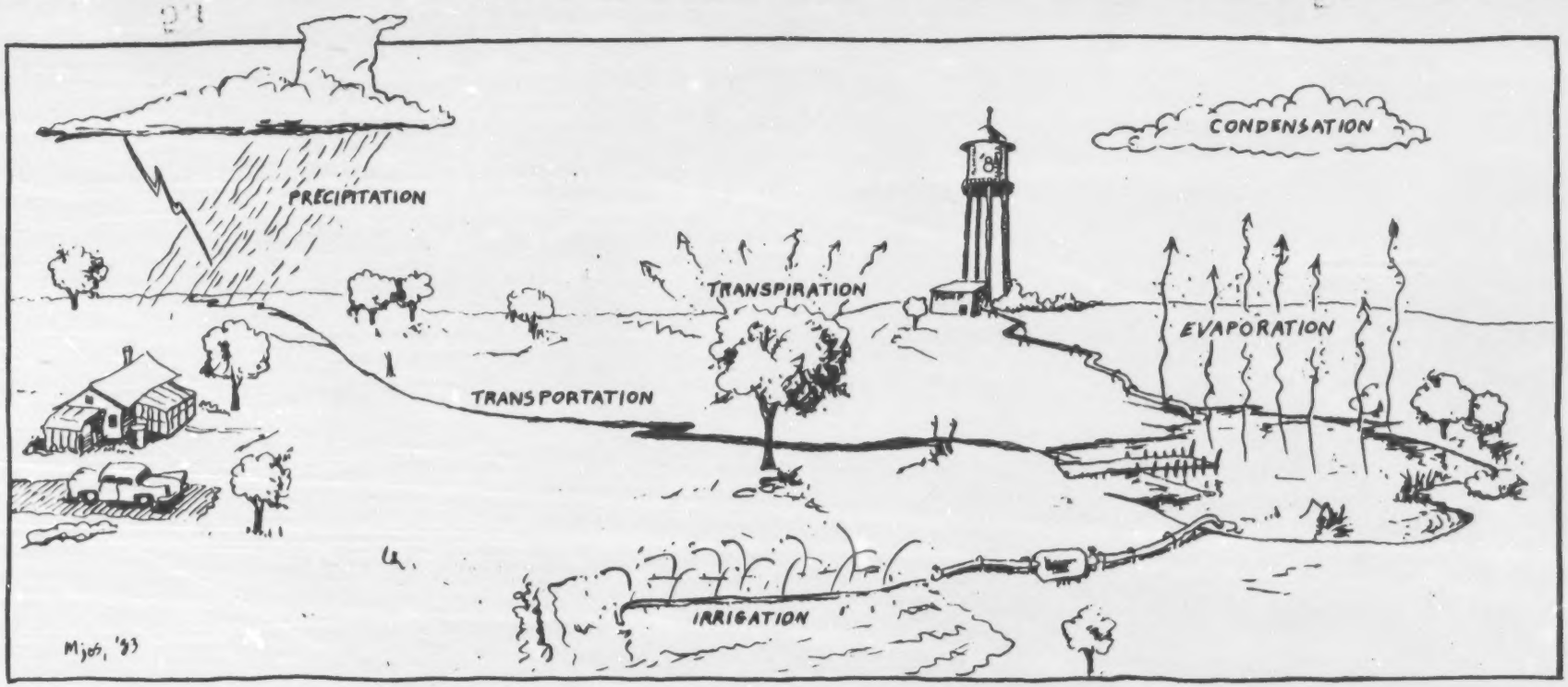
SAVE ENERGY BY USING EFFICIENT LIGHTS!!

Where you now use	Change To	Get this Much Light	Watts Saved Per Lamp	KWH Saved Over life of Lamp	Value of KWH Savings At $.06/KWH
75 Watt	Fluorescent screw-in	same	53	400	$20.00
100 watt	50R20	same	50	100	$ 5.00
150 watt flood	75ER30	same	75	150	$ 7.50
300 watt flood	120ER40	same	180	360	$18.00

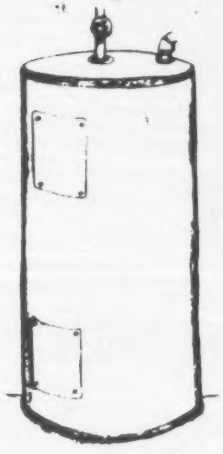
For outside security lights, have the photocell set for two foot-candle level in order to minimize the hours that it is on.

APRIL 1984

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1 *Check filters in heating and cooling system.*	2	3 *Open windows to take advantage of natural ventilation.*	4	5 *Defrost refrigerator or freezer.*	6	7 *Today's Reading ___ - Less Last Week's Reading ___ = Equals Usage for Week ___*
8 *What about your energy tax credits?*	9	10 *Hang clothes outside to dry.*	11	12 *Reduce thermostat setting to 'normal' on hot water heater. Raise it only for special needs.*	13	14 *Today's Reading ___ - Less Last Week's Reading ___ = Equals Usage for Week ___*
Palm Sunday 15	16	Passover Begins 17 *Try car pooling with friends.*	18	19 *Consider installing a timer on your hot water heater in order to reduce its operating hours.*	Good Friday 20	21 *Today's Reading ___ - Less Last Week's Reading ___ = Equals Usage for Week ___*
Easter 22	23	24 *Clean air conditioning unit. Make sure power to unit is turned off.*	25	26 *Teach your children to read the electric meter.*	27	28 *Today's Reading ___ - Less Last Week's Reading ___ = Equals Usage for Week ___*
29 *Use low wattage bulbs in your home.*	30					



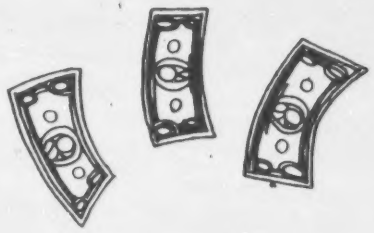
MAY 1984



WATER HEATING

The electric water heater is on duty 24 hours a day, 365 days a year so you can wash your dishes, your clothes, and yourself. This is why it averages 22 percent of your annual electric bill. To lower the cost —

1. Wrap the electric water heater itself in 3½-inch thick insulation.
2. Set thermostat(s) at 150 degrees or lower.
3. Wait until you have a full load before running the dishwasher.
4. Wash full loads of clothes in the coolest water possible.
5. Insulate hot water pipes that are in an unheated area.
6. Fix leaky faucets.
7. When building or remodeling, place the water heater nearest the point of greatest hot water use.



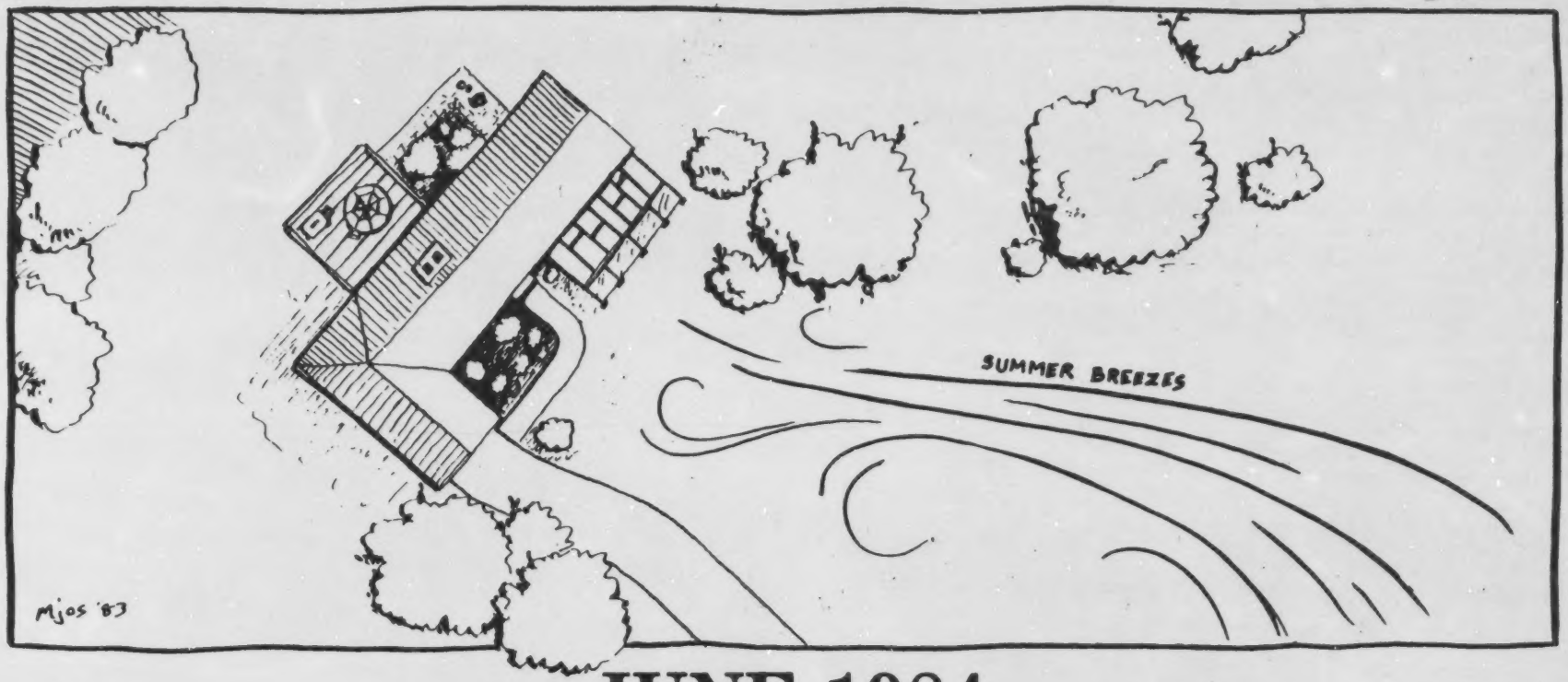
COOLING

Averaging a little over 12 percent of your total annual bill, air conditioning is the third largest user of electricity in your home. To save money while staying cool, you should —

1. Set the cooling thermostat no lower than 78 degrees. (You may be asked to raise this temperature in times of energy shortage.)
2. Purchase a correctly sized air conditioner with a high energy efficiency ratio (EER).
3. Leave storm doors and windows in place year-round.
4. Close draperies on the sunny side of house.
5. Keep air conditioner filters clean.
6. Vent clothes dryer to outside.
7. Do heat-producing jobs, such as cooking and washing, during the cooler parts of the day.

MAY 1984

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1 *Check air conditioner filters. Replace if necessary.*	2	3 *Use correct size burner on range when cooking.*	4	5 *Today's Reading ___* *- Less Last* *Week's Reading ___* *= Equals* *Usage for Week ___*
6 *Limit showers to five minutes.*	7	8 *Check insulation on ductwork. Install insulation and seal open seams or holes.*	9	10 *Are your hot water pipes insulated?*	11	12 *Today's Reading ___* *- Less Last* *Week's Reading ___* *= Equals* *Usage for Week ___*
Mother's Day 13	14	15 *A faucet that drips one drip per second uses 2400 gallons of water a year.*	16	17 *Use full loads when washing clothes.*	18	Armed Forces Day 19 *Today's Reading ___* *- Less Last* *Week's Reading ___* *= Equals* *Usage for Week ___*
20 *Would a paddle fan reduce your use of air conditioning?*	21	22 *Toast bread in a toaster rather than in the oven.*	23	24 *Don't let the water run while brushing your teeth.*	25	26 *Today's Reading ___* *- Less Last* *Week's Reading ___* *= Equals* *Usage for Week ___*
27 *Use fans instead of air conditioning.*	Memorial Day (Observed) 28	29 *Set thermostats at 78° when using air conditioning.*	Memorial Day 30	31 *Plan your shopping trips. Make all stops on one route.*		



JUNE 1984

SHADING WINDOWS

Studies conclude that the most effective means of preventing summer heat gain through windows is to shade them from the outside. Shading on the south side of your house can be provided by roofs or constructed overhangs. Adjustable awnings, trellises, plastic or bamboo shades and sunscreens can be easily installed and are most effective for east and west exposures. A light colored metal or fabric awning, properly attached, can reduce direct solar heat by 70%. Use open ended awnings that are wider than the window to keep the sun out longer during the day.

Metal awnings can be either stationary or roll-up, allowing light in on dark days and for winter storage. Fabric roll-up or stationary awnings are also available, and though less costly and durable, may be preferred for aesthetic reasons. Custom-made awnings are available at greater cost.

Shade screens, sometimes called solar screens, are made of lightweight slitted aluminum to prevent the entrance of sun rays while allowing a view to the outside.

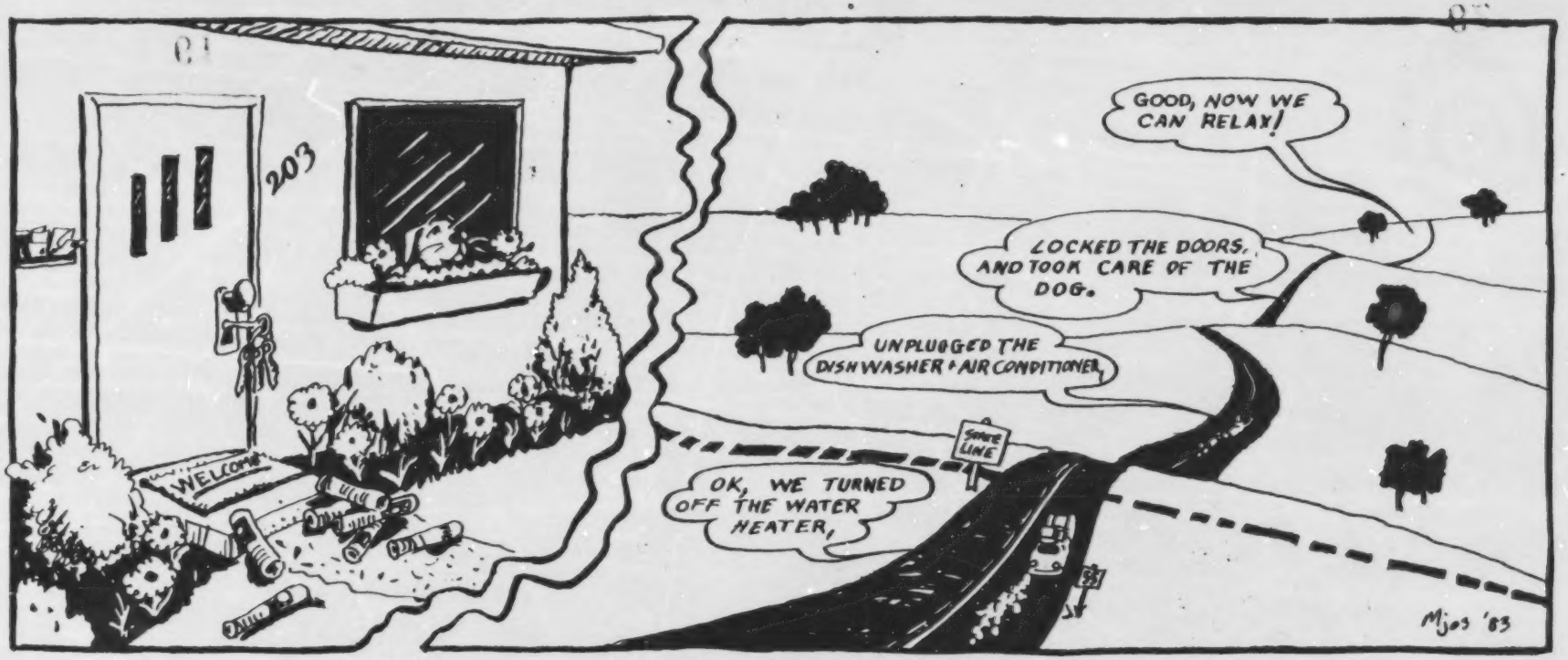
Light colored plastic or natural bamboo roller shades attached to the home exterior can also reduce direct solar heat by 70%. They cost substantially less than awnings and are easy to install.

Reflective plastic films applied to the inside surface of the window will also reduce heat gain.

It is wise to remember that shade screens and reflective films are most effective at blocking sun from east and west windows. Awnings and patio covers on north and south glass areas are most effective without impairing view to the outside.

JUNE 1984

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1	2 *Today's Reading ___* *- Less Last* *Week's Reading ___* *= Equals* *Usage for Week ___*
3 *Check air conditioner filters.*	4	5 *Make plans for your vacation conservation measures.*	6	7 *Play "lights out" with your children. Reward them for turning off lights that are not being used.*	8	9 *Today's Reading ___* *- Less Last* *Week's Reading ___* *= Equals* *Usage for Week ___*
10 *Unload extra weight from trunk of car.*	11	12 *Turn off hot water heater during vacation.*	13	Flag Day 14	15	16 *Today's Reading ___* *- Less Last* *Week's Reading ___* *= Equals* *Usage for Week ___*
Father's Day 17	18	19 *While away on vacation, use a timer to turn lights on and off.*	20	21 *Take advantage of natural ventilation.*	22	23 *Today's Reading ___* *- Less Last* *Week's Reading ___* *= Equals* *Usage for Week ___*
24 *Close drapes to block out daytime sun.*	25	26 *Reduce cooking: eat fresh fruits and raw vegetables.*	27	28 *Wear lightweight clothing.*	29	30 *Today's Reading ___* *- Less Last* *Week's Reading ___* *= Equals* *Usage for Week ___*



JULY 1984

Women	Raise Thermostat Setting
Replace light slacks with light skirt	1.5°F
Replace long-sleeved dress with sleeveless dress	.2°F
Replace dress made of tightly woven cloth with one having an open weave	.5°F
Remove stockings	.1°F
Replace full slip with half slip	.6°F
Remove full slip	1.0°F
Replace pumps with sandals	.2°F

Other Tips for Keeping Cool with Clothing:

—Wear light colors. Dark colors tend to absorb sunlight while light colors reflect it.

—Eliminate layers of clothing. Leave off undershirts, full slips, sport coats, and ties as much as possible.

—Wear sandals or open shoes. Open footwear allows heat to escape and perspiration to evaporate.

—Wear a hat to shade you from direct sun. Choose a wide-brimmed straw or other fiber or construction that will allow air to move in and out.

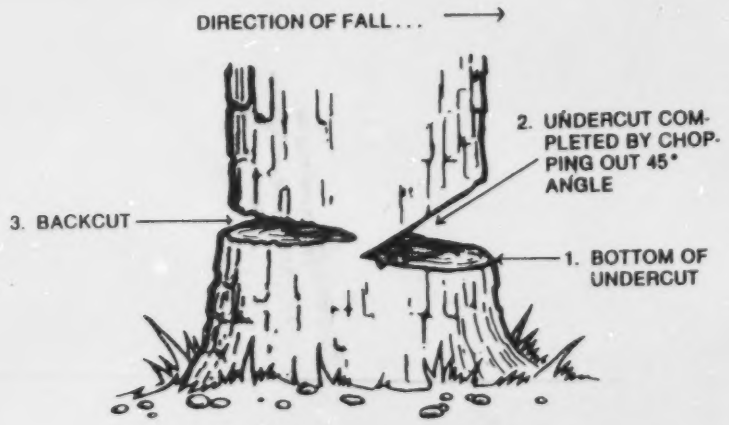
—Avoid wearing a lot of accessories like neck scarves and belts. These add extra layers that block air movement across the skin.

Men	Raise Thermostat Setting
Replace heavy trousers with light trousers	.6°F
Replace winter-weight jacket with summer jacket	2.5°F
Replace long-sleeved shirt with short-sleeved shirt	.8°F
Replace long, light trousers with Bermuda shorts	1.0°F
Remove summer-weight jacket	2.0°F
Remove undershirt (T-shirt)	.5°F
Remove tie and open collar	.2°F
Replace knee-length socks with ankle socks	.6°F

JULY 1984

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1 *Check air conditioner filters.*	2	3 *Set thermostat at 78°.*	Independence Day 4 *SAVE ENERGY!! Show your independence.*	5 *Close drapes to keep out solar heat.*	6	7 *Today's Reading ___ - Less Last Week's Reading ___ = Equals Usage for Week ___*
8 *Turn off unused lights.*	9	10 *Check for blocked air conditioner vents.*	11	12 *When leaving on vacation, unplug appliances.*	13	14 *Today's Reading ___ - Less Last Week's Reading ___ = Equals Usage for Week ___*
15 *The lower the wattage, the less energy used.*	16	17 *When the house is unoccupied, turn off the air conditioner.*	18	19 *Plan cold-cut meals.*	20	21 *Today's Reading ___ - Less Last Week's Reading ___ = Equals Usage for Week ___*
22 *Use a timer when cooking to keep from opening the oven.*	23	24 *Check tire pressure weekly.*	25	26 *Dry clothes outside.*	27	28 *Today's Reading ___ - Less Last Week's Reading ___ = Equals Usage for Week ___*
29 *Cook food in large quantities and freeze in serving-size containers.*	30	31 *Have you had an energy audit performed on your home?*				

AUGUST 1984

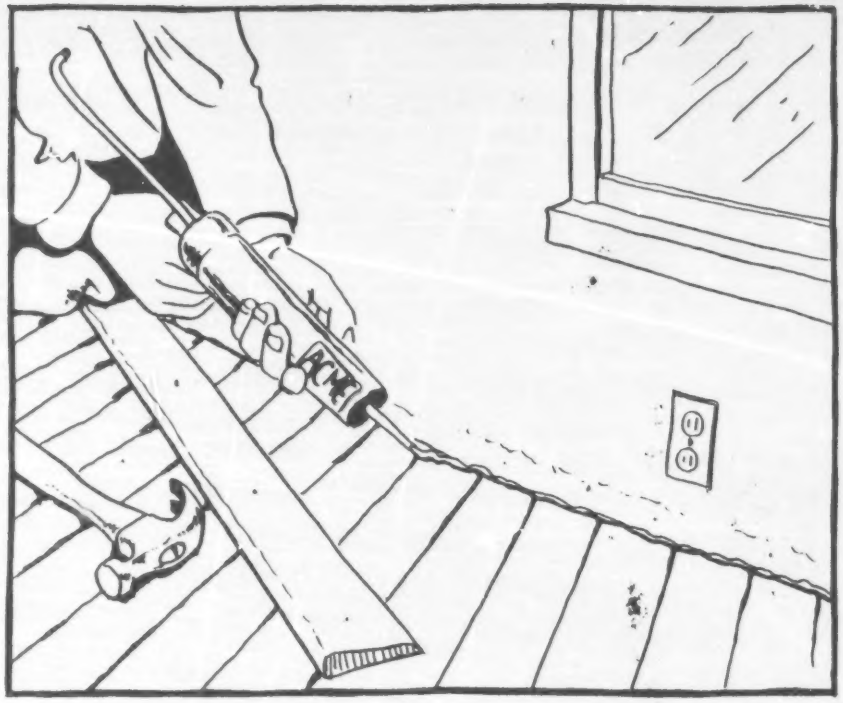


Quality Characteristics of Commonly Burned Woods

Species	Easy to Split	Ease of Starting	Heavy Smoke	Sparks	Coaling Qualities	Heat Value Per Cord (Million BTU) Green	Heat Value Per Cord (Million BTU) 12% Moisture
Apple	yes	poor	no	few	excellent	23.5	32.0
Ash	yes	fair	no	few	good	26.0	28.3
Beech	no	poor	no	few	good	24.0	30.6
Birch (white)	yes	good	no	moderate	good	27.1	31.1
Cherry	yes	poor	no	few	excellent	20.0	23.8
Cedar	yes	excellent	yes	many	poor	16.4	22.4
Hemlock	yes	good	medium	many	poor	22.2	19.0
Hickory	yes	fair	no	moderate	excellent	29.0	35.3
Locusts (black)	no	poor	no	very few	excellent	25.8	32.6
Maple (sugar)	yes	poor	no	few	excellent	27.4	30.4
Oak (red)	yes	poor	no	few	excellent	27.5	30.4
Pine (white)	yes	excellent	medium	moderate	poor	17.3	18.1

AUGUST 1984

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1	2 *Check air conditioner filters and replace if necessary.*	3	4 *Today's Reading ___ - Less Last Week's Reading ___ = Equals Usage for Week ___*
5 *Set air conditioner thermostat at 78°.*	6	7 *Shade sunny windows.*	8	9 *Clean drains and filters in the dishwasher.*	10	11 *Today's Reading ___ - Less Last Week's Reading ___ = Equals Usage for Week ___*
12 *Air dry dishes in dishwasher.*	13	14 *Reduce the number of hot meals.*	15	16 *Avoid preheating oven.*	17	18 *Today's Reading ___ - Less Last Week's Reading ___ = Equals Usage for Week ___*
19 *55MPH saves you money.*	20	21 *Use attic exhaust fans.*	22	23 *For self-cleaning ovens, clean during the cool part of the day.*	24	25 *Today's Reading ___ - Less Last Week's Reading ___ = Equals Usage for Week ___*
26 *Are you reducing your kilowatt usage?*	27	28 *Make sure filter in the clothes dryer is cleaned before each use.*	29	30 *Keep freezer and refrigerator defrosted.*	31	



SEPTEMBER 1984

Cutting The Wood

According to a 1974 survey, 86% of the woods accidents were related to unsafe practices. The majority of these accidents resulted from loading wood and using chainsaws. Contributing to loading accidents were broken hands and feet, cuts, strains, and sprains. Chainsaw accidents resulted in cuts to the legs, hands, arms, and face. The following are some general safety tips to aid you while cutting wood.

Wear Protective Clothing

Proper clothing is just as important to your safety as knowing how to fell a tree. The following should be worn when working in the forest.

- Hard hat
- Safety goggles
- Comfortable but trim fitting clothes
- Work gloves
- Hard toe shoes with non-skid soles
- Ear plugs — when exposed to prolonged chainsaw noise.

Respect Your Chainsaw

Before using your saw, get to know it well. Read the owner's manual from cover to cover.

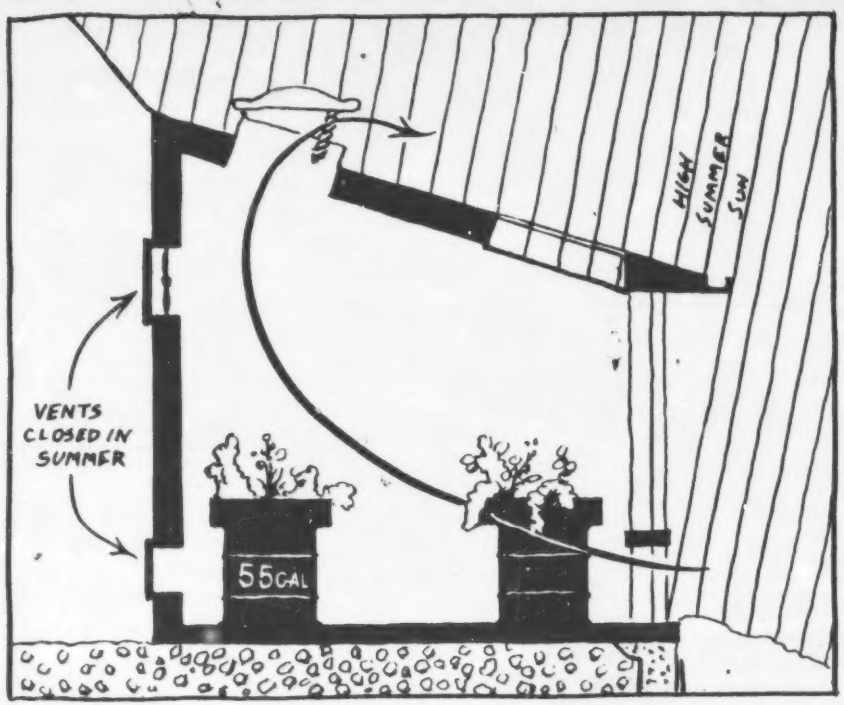
1. When carrying a chainsaw any distance, be sure that you carry it by the handle with the motor off and the guide bar to the rear.
2. Never attempt to start a chainsaw on your knee or in the air. Start the saw on solid ground that has been cleared to mineral soil.
3. When moving from tree to tree with the saw, make sure the chain is not moving and your finger is not on the saw trigger.
4. Allow the saw to cool before refilling with gasoline. Refuel the saw in an area that has been cleared to mineral soil. Carry all gasoline in approved safety cans.

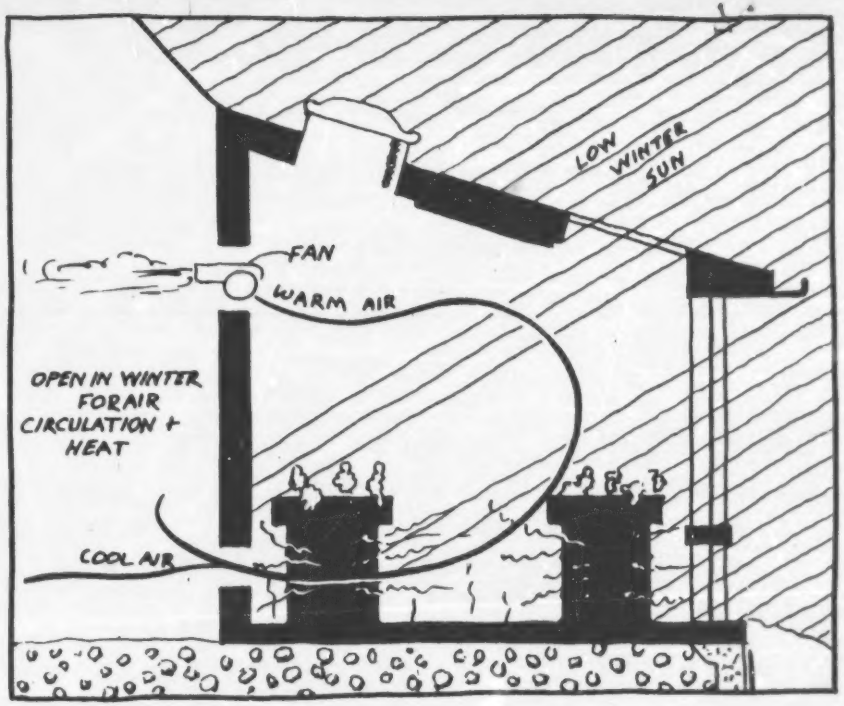
Know Your Logging Basics

1. Before felling, check the top of the tree to see if widow-makers (broken or dead limbs) are present.
2. Clear the area around the base of the tree and make sure that surrounding brush will not hinder your line of retreat.
3. An undercut should be made on all trees and should be at least one-third of the diameter through.

SEPTEMBER 1984

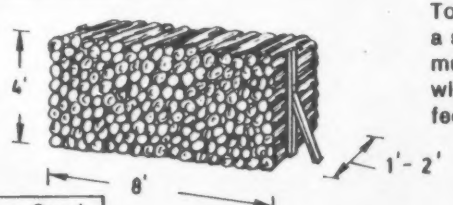
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1 *Today's Reading ___* *- Less Last* *Week's Reading ___* *= Equals* *Usage for Week ___*
2 *Have you reduced the number of 100 watt bulbs used in your home?*	Labor Day 3	4 *Each time the toilet is flushed it uses 5 to 7 gallons of water.*	5	6 *When filling the bathtub, don't allow the water to run down the drain until it is warm.*	7	8 *Today's Reading ___* *- Less Last* *Week's Reading ___* *= Equals* *Usage for Week ___*
9 *Open windows in the early morning and at night.*	10	11 *Lower the thermostat on the hot water heater.*	12	13 *Start preparing for winter.*	14	15 *Today's Reading ___* *- Less Last* *Week's Reading ___* *= Equals* *Usage for Week ___*
16 *Turn out lights not being used.*	17	18 *A 5 minute shower can save you 10,000 gallons of water a year.*	19	20 *Insulate hot water heater and pipes.*	21	22 *Today's Reading ___* *- Less Last* *Week's Reading ___* *= Equals* *Usage for Week ___*
23 *Have you had a home energy audit?* 30	24	25 *Make sure chimneys and flues are cleaned before use.*	26	27 *Have you made preparations for your winter wood supply?*	28	29 *Today's Reading ___* *- Less Last* *Week's Reading ___* *= Equals* *Usage for Week ___*



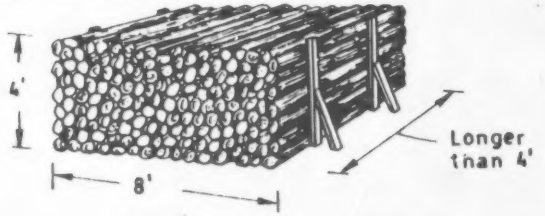


OCTOBER 1984

Face or Short Cord

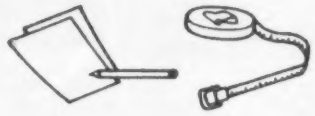


Long Cord

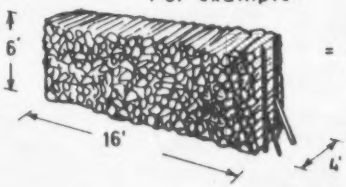


Measurement Units

To calculate the number of cords in a stack of wood, multiply the pile's height by its width, & then by stick length (all in feet), then divide by 128.

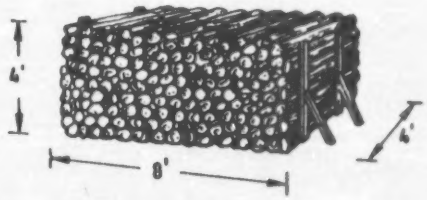


For example: $\frac{6 \times 16 \times 4}{128}$ = 3 Standard Cords



Standard Cord

Total Volume = 128 cu. ft



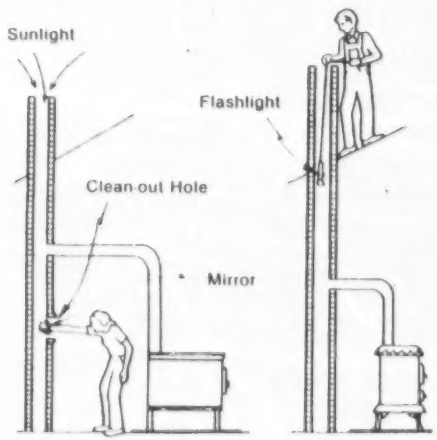
Unit

A unit is approximately 1/24 of a standard cord and will fit into a car trunk or station wagon.

OCTOBER 1984

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2 *Check heating system filters, replace if necessary.*	3	4 *Take advantage of natural ventilation.*	5	6 *Today's Reading ____ - Less Last Week's Reading ____ = Equals Usage for Week ____*
7 *Use only full loads in the dishwasher.*	8 Columbus Day (Observed)	9 *Inspect faucets for leaks.*	10	11 *A hot water leak can cost 50 cents a day.*	12 Columbus Day	13 *Today's Reading ____ - Less Last Week's Reading ____ = Equals Usage for Week ____*
14 *Water costs 4 cents an inch in the bathtub.*	15	16 *Check windows and doors for air leaks. Weatherstrip where needed.*	17	18 *Is the ductwork in your house properly insulated?*	19	20 *Today's Reading ____ - Less Last Week's Reading ____ = Equals Usage for Week ____*
21 *The higher the R-Value of insulation, the better it is.*	22	23 *Keep woodpile covered so it will stay dry.*	24	25 *Have you checked your chimney for creosote buildup.*	26	27 *Today's Reading ____ - Less Last Week's Reading ____ = Equals Usage for Week ____*
28 *Most chimney and flue fires are caused by creosote buildup.*	29	30 *When the fireplace is not used, keep the damper closed.*	Halloween 31			

NOVEMBER 1984



Inspecting the Chimney

Stove pipes and chimney flues should be inspected frequently for creosote build-up, especially during the first wood burning season. One method for checking stove pipes is to tap on the pipe with a metal object. The sound will change from a metal ping to a dull thud as materials build up inside the pipe. The chimney may be inspected from the roof or, in some cases, a mirror can be used to look up through the chimney flue. If you use an air-tight stove, check the stove pipes once a month.

Follow these steps if you have a chimney fire.

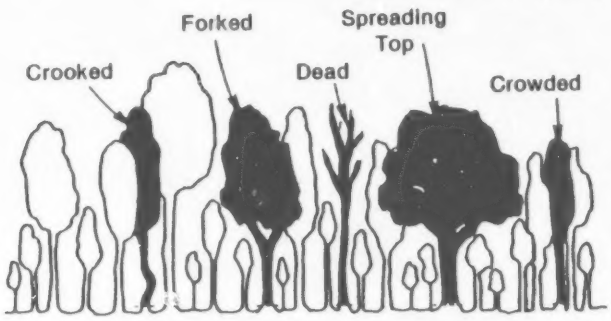
1. Call the fire department immediately.
2. Close all openings and draft controls if you have an air-tight stove. Close the stove pipe damper in a non-airtight stove.
3. If the fire is still burning, squirt a fire extinguisher or throw baking soda onto the fire in the stove. The chemical travels up the chimney and often extinguishes the fire.

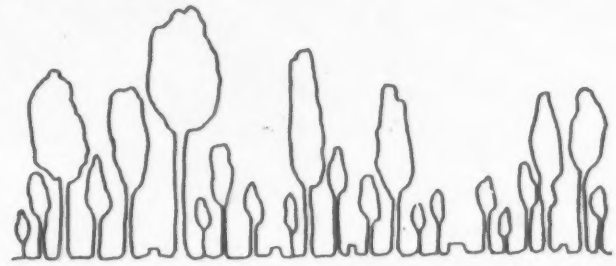
NOVEMBER 1984

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				1 *Check heating system filters.*	2	3 *Today's Reading ___* *- Less Last* *Week's Reading ___* *= Equals* *Usage for Week ___*
4 *Dress warmly and lower the thermostat setting.*	5	Election Day 6	7	8 *Close doors quickly to reduce heat loss.*	9	10 *Today's Reading ___* *- Less Last* *Week's Reading ___* *= Equals* *Usage for Week ___*
Veteran's Day 11	12	13 *Install storm windows or cover windows with plastic sheets.*	14	15 *Check under the house to see if floors and ductwork are insulated.*	16	17 *Today's Reading ___* *- Less Last* *Week's Reading ___* *= Equals* *Usage for Week ___*
18 *Space heaters may be more efficient this month.*	19	20 *Set thermostat at 68°.*	21	Thanksgiving 22	23	24 *Today's Reading ___* *- Less Last* *Week's Reading ___* *= Equals* *Usage for Week ___*
25 *When using space heaters, provide adequate ventilation.*	26	27 *Turn off all unnecessary lights and appliances.*	28	29 *Clothing made of natural materials keep you warmer than man-made materials.*	30	

DECEMBER 1984

Improve the value of your woodlot while gathering fuelwood.





After fuelwood cutting

Wood is an economically competitive fuel if it can be

1. efficiently prepared for use with a minimum of handling,
2. obtained as a result of properly managed home woodlands,
3. cut in advance (at least 6 to 10 months) to season properly, and
4. burned in a properly designed heater.

DECEMBER 1984

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1 *Today's Reading ___* *- Less Last* *Week's Reading ___* *= Equals* *Usage for Week ___*
2 *Is your family involved in energy conservation?*	**3**	**4** *When cooking is finished, leave oven door open to heat the kitchen.*	**5**	**6** *Are you using any 100 watt bulbs? If so, replace them with lower wattage bulbs.*	**7**	**8** *Today's Reading ___* *- Less Last* *Week's Reading ___* *= Equals* *Usage for Week ___*
9 *Check doors and windows for air leaks. Weatherstrip if necessary.*	**10**	**11** *As much as possible, cook holiday foods ahead of time.*	**12**	**13** *Energy conservation devices make good Christmas gifts.*	**14**	**15** *Today's Reading ___* *- Less Last* *Week's Reading ___* *= Equals* *Usage for Week ___*
16 *Setting the thermostat back one degree can save 3% on the heating portion of your bill.*	**17**	**18** *When cooking, fit pan to the element. Also, do not preheat oven.*	**19**	**20** *Automatic dishwashers use an average of 14 gallons of hot water per load.*	**21**	**22** *Today's Reading ___* *- Less Last* *Week's Reading ___* *= Equals* *Usage for Week ___*
23 *Burning paper in the fireplace or stove is a bad practice.* **30**	**24** **31**	**25** Christmas Day *MERRY CHRISTMAS!*	**26**	**27** *Keep building conservation habits.*	**28**	**29** *Today's Reading ___* *- Less Last* *Week's Reading ___* *= Equals* *Usage for Week ___*

MONITORING HOME ENERGY COSTS

You may wish to use either your utility bills or the data that you have collected by using the Saturday blocks in this calendar to develop a monthly energy costs record. To compare these monthly entries with last year's costs, you may be able to obtain a record of last year's changes from your local utilities company. It is a good practice for energy awareness.

MONTH	NATURAL GAS		ELECTRICITY		COAL		LP GAS		OIL		WATER		WOOD		OTHER	
(begin with most recent month)	amount used	total cost	amount used	total cost	amount used	total cost	amount used	total cost	amount used	total cost	amount used	total cost	amount used	total cost	amount used	total cost
TOTALS																